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- Navy Warfare Centers
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Recent thesis research accomplishments

- *Performance Analysis of IEEE 802.11g Signals Under Different Operational Environments*, LTJG S. Filtikakis, Hellenic Navy.
- *FPGA Implementation of a BFSK Transmitter/Receiver*, Capt J. Svenningsen, USMC.
- *A Person Tracking Mobile Robot Using An Ultrasonic Positioning System*, Capt C. Hao Yang, Taiwan Army.
- *Novel Approach to Using Silvaco to Simulate and Design Tunnel Junctions*, LT R. Gelinas, USN.
- *Distributed Beamforming in Wireless Sensor Networks*, Mr. C. Chan, Singapore Ministry of Defense.
- *Security of Sensor Networks*, Mr. H. Teo, DSO National Laboratories, Singapore.
- *Wireless Smart Shipboard Sensor Network*, LT A. Nozik, USN.
- *A Novel Photovoltaic Power Converter for Military and Space Application*, LT R. Fernandez, USN.
- *Face Recognition Using Infrared Imaging*, Capt D. Domboulas, Hellenic Air Force.
- *Sensor Synchronization, Geolocation and Wireless Communication in a Shipboard Opportunistic Array*, Maj Y. Loke, Singapore Navy.
- *Particle Swarm Optimization for Detection of LPI Emitters*, ENS N. Frantz, USNR.

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Sensors

- Sensor theory, technology, & application to battlefield weapons & surveillance systems.
- Active & passive sensor systems (lidar, multi-mode tactical radar systems, underwater sensors & sonar systems).
- Network-centric electronic warfare concepts, distributed sensor networks, sensor attack & protection.

Communications & Signal Processing

- Wireless communication schemes.
- Multipath fading effects on wireless transmissions & mitigation techniques.
- Bandwidth & power efficient modulation and coding schemes.
- Link budget analysis
- Underwater communications.
- Biometrics & classification.
- Speech recognition.

Nanotechnology & Ship Power

- Emerging nanotechnology applications.
- Robustness & reliability of next generation integrated circuits.
- MEMs for sensors and C4I.
- Electrical power for military platforms.
- Radiation-hardened electronics for space and strategic systems.
- Electric ship power design & modeling.

Network Engineering

- Dynamics of distributed systems.
- Wireless, ad-hoc and sensor networks.
- Performance, quality of service & security issues.
- Infrastructure of network-centric defense systems.
- State-of-the-art networking equipment: optical switches, routers, wireless access points, traffic generators, channel simulators, protocol analyzers.